

CLAIMS

1. An apparatus for monitoring the level of a liquid in a vessel (2), the apparatus comprising at least one metallic probe (10) hermetically sealed within the vessel to act as a first electrode, the sealing end (22) of the probe being encased within a glass material, a second electrode spaced apart from said first electrode to form a capacitor, means (14) for applying an electric current to the capacitor and means for monitoring the capacitance thereof.
2. An apparatus as claimed in claim 1 wherein the vessel itself is a metallic container and acts as the second electrode.
3. An apparatus as claimed in claim 1 or claim 2 wherein the probe is made of stainless steel.
4. An apparatus as claimed in any one of claims 1 to 3 wherein the glass material is a borosilicate glass.
5. An apparatus as claimed in any one of claims 1 to 4 wherein the probe is hermetically sealed within a port provided at the top of the vessel.
6. An apparatus as claimed in claim 5 wherein the probe is sealed within a mounting or cap (30) that is inserted into the port of the vessel.
7. An apparatus as claimed in claim 6 wherein the mounting is provided with electrical connections for the probe.
8. An apparatus as claimed in any one of the preceding claims wherein the probe is provided with a coating of an elastomeric material over at least the part that extends from the seal.

9. An apparatus as claimed in any one of the preceding claims wherein at least the part (22) of the probe that is encased within a glass material comprises a nickel alloy.
10. An apparatus as claimed in claim 9 wherein the alloy is an Inconel or Kovar alloy.
11. An apparatus as claimed in claim 9 or claim 10 wherein the alloy contains aluminium and/or titanium.
12. An apparatus as claimed in claim 11 wherein the alloy is Inconel X-750.
13. An apparatus as claimed in any one of claims 6 to 12 wherein the mounting (32) is made of a nickel alloy.
14. An apparatus as claimed in claim 13 wherein the alloy is Inconel X-750.
15. An apparatus as claimed in any one of the preceding claims further comprising monitoring means for measuring a change in capacitance.
16. An apparatus as claimed in claim 15 further comprising a recorder for recording a change in capacitance.
17. An apparatus as claimed in claim 16 further comprising display means for displaying the level of liquid in the vessel.
18. An apparatus as claimed in any one of the preceding claims further comprising calibration means for calibration of the apparatus whereby a particular capacitance corresponds to a particular volume of liquid within the vessel.
19. The use of an apparatus as claimed in any one of the preceding claims in monitoring the level of organometallic compounds.

20. An apparatus as claimed in one of claims 1 to 18 wherein the vessel is a bubbler.
21. A bubbler containing an organometallic compound, the bubbler comprising a sealed metallic container having an inlet pipe (4), and outlet pipe (8) and a dip tube (6) and further comprising a metallic probe (10) hermetically sealed within the container, the sealing end (22) of the probe being encased within a glass material, the container and the probe forming a capacitor, means for applying an electric current to the capacitor and monitoring means for measuring the capacitance thereof.
22. A method for monitoring the level of an organometallic compound in a vessel, the method comprising the steps of inserting at least one metallic probe (10) into a vessel (2) to act as a first electrode, one end (22) of the probe being encased in a glass material, hermetically sealing the end of the probe encased in a glass material within the vessel, providing a further electrode to form a capacitor, applying an electric current to the capacitor and monitoring the capacitance thereof.

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